



## Drying guide for wood



**IMPORTANT:** Data from samples may be used in investigations and enforcement actions. It is vital to avoid mold growth and keep samples below 45°C.

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# Basic drying protocols for wood

- 1. All efforts must be made to avoid mold on samples.
- 2. Do not use chemicals to prevent mold.
- 3. Package all samples with silica beads.
- 4. Silica beads must not come into direct contact with samples.
- 5. Do not use silica beads that are blue or that contain cobalt.
- 6. Ensure samples do not get mixed up during the drying process.
- 7. Set ovens or drying equipment at 45°C.
- 8. Ensure sample temperature does not exceed 45°C.
- 9. If samples exhibit cracking, slow the drying process.
- 10. Samples must have moisture content below 16% before dispatch.
- 11. Avoid contamination of samples during the drying process.
- 12. Do not use a microwave for drying samples.

### Tools/equipment for drying

- 1. Oven or dehumidifier.
- 2. Infrared thermometer gun or oven thermometer.
- 3. Blotting paper or drying racks.
- 4. Moisture meter.
- 5. Silica beads.
- 6. Compact collapsible shovel.
- 7. Plastic ground sheet.
- 8. Lightweight tarp or rain cover.
- 9. Muslin sheet.
- 10. Aluminum trays.
- 11. Lighter.



### Drying overview and options

Ask your Expedition Leader about which drying techniques to use.



### Measuring moisture levels

Measure multiple samples per batch to verify consistent drying.

#### **MOISTURE STRIPS:**

Seal the strip inside a plastic bag along with the sample and leave for 20 mins before taking a reading. Always handle strips by the edge and replace them after each drying session. Try to keep a strip in each ziplock at all times.



#### **MOISTURE METER:**

This is the most accurate method to measure moisture. Place pins directly into the sample, take 3 readings and average the result.



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### Silica beads



WHITE (Non indicating)

**ORANGE** (Non-cobalt indicator)

Silica beads (silicon dioxide) are very effective at absorbing moisture. Indicators inside the beads can allow you to see how much moisture they have absorbed.





#### DO NOT USE SILICA BEADS THAT ARE BLUE OR THAT CONTAIN COBALT



#### **DRYING SATURATED SILICA BEADS**

- 1. Heat oven to 100°C. Place the used silica beads evenly on a clean baking sheet.
- 2. Dry for 1-2 hours or until bead color indicates that they are dry.
- 3. Store dried silica beads in an airtight container until next use.

### Silica beads use

Silica beads can be used both in the field or back at base to bring your samples below the 16% moisture level required for dispatch.

- 1. Add 50 g of silica beads/sachets to each ziplock bag.
- 2. Ensure that the ziplock bag is sealed.
- 3. Change beads every 12 hours or when saturated.
- 4. Check sample moisture with a meter every 12 hours.

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SILICA BEADS MUST NOT COME INTO DIRECT CONTACT WITH SAMPLES

## Sun drying

1. Lay a plastic sheet on unshaded, even ground, securing if needed.



3. Turn samples intermittently & cover with a muslin sheet while drying.

2. Keep samples packaged & grouped together based on their barcode.



4. Keep a second plastic sheet for rain protection if needed.



5. Ensure the barcodes match when repackaging samples in ziplocks.





### **Controlled ember drying**

1. Find a location away from vegetation/combustible materials.



2. Dig a shallow trench about 10 cm deep and line it with stones.



- 3. Build a small fire using small twigs and gradually add larger branches.
- 4. Allow the fire to die down to embers.





- 5. Place branches across the fire to act as supports.
- 6. Position the aluminum trays across the supports.





7. Monitor the temperature until it falls below 45°C.



9. Monitor the temperature to ensure it does not exceed 45°C.

8. Arrange the samples in the trays without removing the packaging.



10. Ensure the barcodes match when repackaging samples in ziplocks.





### Dehydrator and oven drying



#### **DEHYDRATOR DRYING:**

This is the most effective method of drying. Set temp at a maximum of 45°C. Rotate the samples periodically to ensure even dehydration.

Drying time: 12-24 hours

#### **OVEN DRYING:**

Set temp at a maximum of 45°C. Rotate the samples periodically to ensure even dehydration and keep oven door slightly open or open it periodically to facilitate moisture escape.

Drying time: 12-24 hours



#### SAMPLE TEMPERATURE MUST NOT EXCEED 45°C

To check temperature use an additional oven thermometer or infrared thermometer gun.

### Air drying

1. Clean all surfaces and start drying immediately after collection.



- 3. Keep samples from each tree together to avoid confusion.
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- 5. Ensure the barcodes match when repackaging samples in ziplocks.



2. Lay samples on racks or on blotting paper, retaining the packaging.



 If using a dehumidifier, close doors & windows and empty regularly.



### **Completing the Proforma**

#### ALL SAMPLES IN THIS BAG MUST COME FROM THE SAME TREE



Use App or GPS device for accurate location. Package with fresh silica beads before dispatch.

### Our PDF guides

#### WOOD

Collection guide for wood Drying guide for wood Dispatch guide for wood **SOY** Collection guide for soy Drying guide for soy Dispatch guide for soy

### **COCOA** Collection guide for cocoa Drying guide for cocoa Dispatch guide for cocoa

### **OIL PALM** Collection guide for oil palm Drying guide for oil palm Dispatch guide for oil palm

**COFFEE** Collection guide for coffee Drying guide for coffee Dispatch guide for coffee

#### GENERAL

World Forest ID overview Tool maintenance Expedition planning



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